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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 14
Hydrographic }

State FLORIDA

LOCALITY

FLORIDA KEYS

LOWER MATECUMBE ^{Key} TO

GRASSY KEY

1935

CHIEF OF PARTY

E. R. McCarthy

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT
to accompany
HYDROGRAPHIC SHEET NO. 14 H 5952 (1935)

LOWER MATECUMBE TO GRASSY KEY

FLORIDA

Party No. 14

E. R. McCarthy,
Lieut.(j.g.) C&GS,
Chief of Party.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 14 **H5952** (1935)

REGISTER NO.

State FLORIDA

General locality FLORIDA KEYS

Locality LOWER MATECUMBE TO GRASSY KEY

Scale 1:20,000 Date of survey March - May, 19 35

Vessel PARTY NO. 14

Chief of Party E.R.MCCARTHY

Surveyed by J.T.J., J.B.F., T.R.P. ^{inch}

Protracted by M.B.G., JR., C.G.L., L.G.K.

Soundings penciled by C.G.L., L.G.K.

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by

Inked by G. C. McGlasson

Verified by G. C. McGlasson

Instructions dated November 17, 1933 (H.A.Cotton), 19 33

Remarks:

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET NO. 14 H 5952 (1935)

AUTHORITY:

Instructions of the Director dated November 17, 1933,
(H.A.Cotton).

LIMITS:

Lower Matecumbe Key to Grassy Key and from shore to
the ten fathom curve. Includes development of Channel Two,
Channel Five, and Conch Key Banks.

METHODS:

Soundings were taken with a bronze centered lead
line graduated in fathoms and feet for practically all sound-
ings. A wooden sounding pole graduated in feet and half feet
was used on the inshore skiff work.

Position was fixed by sextant angles on three known
points located by triangulation or topography. A few hydro-
graphic signals were located by sextant angles.

EQUIPMENT:

Two sixty-five foot launches (wire drag type), two
forty foot leased launches, a twenty foot leased launch and a
skiff with an outboard motor were used on the sheet.

DISCREPANCIES:

The sounding lines cross quite well as any excessive
crossings are in areas of irregular bottom.

Junction with Sheet No. 12B on the east is good.

H 58922 (1935)

Junction with Sheet No. 13 on the north is good.

H 5947 (1935)

Junction with Sheet No. 16 on the west will be taken
up in the report for that sheet.

H 6133 (1935-36)

One sounding was apparently called in error, Volume 16,
Page 25 (25b-A) and Volume 19, Page 52-5.

COMPARISON WITH PREVIOUS SURVEYS:

No previous surveys were available so the sheet was compared with Chart No. 1250 and the differences taken up under the heading, "Shoals and Dangers".

GENERAL:

Depths in general have deepened slightly and in sand areas are probably continually changing. The shoalest sections of a sand bank or shoal are usually found on the Gulf Stream side.

SHOALS AND DANGERS: (All reference to chart 1250).

Position number followed by initial of boat: A - Amalie, D - Denny, M - Marie, S - Skiff.

Note: In investigating shoals, the area was examined and if bottom was sand the lines were split and if rock was searched across thoroughly for a coral head or high spot.

This survey was compared with an enlarged scale bromide of Chart No. 1250. Soundings on the bromide do not usually check the positions of the apparently same shoals on the present survey but generally like depths may be found within a radius of two to three hundred meters.

1. Lat. 24 - 46.5 / Long. 80 - 43.4:

Chart shows a tongue with a depth of 28' projecting to the S.W. Survey indicates a least depth of 29' and the tongue falling short of the charted length. *A deepening of 1 to 2 feet has changed the 30 ft. curve.*

2. Lat. 24 - 46.1 / Long. 80 - 44.1 :

Chart shows a 30' sounding within the 30' curve. Survey shows a slightly irregular sand bottom with least depth of 31' (7t-M) in vicinity. *See review par. 7. for general deepening noted.*

3. Lat. 24 - 46.3 / Long. 80 - 44.5 :

Chart shows an 18' isolated shoal. Survey shows a small sand shoal with a least depth, upon investigation, of 17' (5aa-M).

4. Lat. 24 - 46.5 / Long. 80 - 44.7 :

A small sand and rock shoal was found with a least depth of 14½' (39u-M). Area was investigated on "x" day (82x-M). It is not on present chart.

SHOALS AND DANGERS: (CONTINUED)

5. Lat. 24 - 46.7 / Long. 80 - 44.2 :

Chart shows a large shoal inside of 18' curve with least depth of 12' on its south side. Area was developed and found of approximately same size and least depth of 12' (29-30r-M) on south east edge. ✓

6. Lat. 24 - 47.6 / Long. 80 - 44.0 :

Chart shows isolated 18' shoal. Survey shows a "Y" shaped ridge with least depth, upon development, of 16½' (2-3p-M). ✓

7. Lat. 24 - 46.9 / Long. 80 - 44.8 :

Chart shows an isolated 15' shoal. Survey shows a shoal of same shape 0.1 mile south with least depth, upon investigation, of 10½' (5-6u-M). *Bottom hrd S, shoal probably shifted in position.* ✓

8. Lat. 24 - 47.1 / Long. 80 - 44.6 :

A depth of 13' (7u-M) was found in general depths of 15-16'. Not on present chart. ✓

9. Lat. 24 - 48.4 / Long. 80 - 44.5 :

Chart shows an isolated 16' shoal. Survey shows a long ridge 0.1 mile to S. and W. with least depth, upon investigation, of 18' (26s-A) in west section and 16½' (28-31s-A) in east section. ✓

10. Lat. 24 - 49.6 / Long. 80 - 44.8 :

Chart shows 6' here on long tongue extending from inshore. Survey (see also sheets 12-13) indicates tongue has deepened to 7'. *6ft. isolated shoal shown on H-5892 (1935).* ✓

11. Lat. 24 - 49.5 / Long. 80 - 44.6 :

A sounding was evidently called one fathom in error (pos. 25b-A). The area was investigated on (m day - A). See Volume 16, Page 25 and Vol. 19, Page 52-5 for investigation of area. *The 5ft. sounding was rejected.* ✓

12. Lat. 24 - 50.2 / Long. 80 - 44.8 :

Chart shows 3' here. Survey shows a shoal on the east side of Channel Two with a least depth, upon investigation, of 4' (99c-D). *The 3ft. sounding is in a changeable area.* ✓

13. Area north of railroad east of Long. 80-45 :

This area was traced off and submitted as an overlay for Sheet No. 13. The area is taken up in the report for that sheet. *H-5947 (1935)* ✓

14. Lat. 24 - 45.5 / Long. 80 - 45.1 :

Chart shows 23'. Area investigated and a least depth of 25½' (74x-M) obtained. *See review par. 7; general deepening has occurred in the area.* ✓

SHOALS AND DANGERS: (CONTINUED)

15. Lat. 24 - 46.0 / Long. 80 - 45.2 :

Chart shows 13' in the vicinity of "Bn. I". Area investigated and least depth of 12½' (8aa-M) obtained. Bn. I was destroyed by the hurricane of Sept. 2-3, 1935 and only the stump remains projecting about 3' above the water. As this beacon is close to "Tennessee Reef Bn.", the U.S. Lighthouse Service plans, in the near future, to pull the stump and not replace it.

Bn. I was rebuilt, see N.M. 18 of 1936.

The 12½' sounding is on the south side of a large sandy shoal with general depths of 16-18'.

Note: The chart shows the area in the vicinity of Tennessee Reef to be enclosed within the 18' curve. The survey shows that the bottom is irregular with numerous shoal patches of 17-18'. General depths are from 19-21'.

16. Lat. 24 - 45.5 / Long. 80 - 45.9 :

Chart shows 15'. Survey shows irregular bottom (16-23') in vicinity with a least depth in area of 16' (59x-M), about 0.1 mile S.W. and 18' (109s, 66-7u-M) in immediate vicinity. Bottom is sand, was developed but not investigated as area has probably deepened.

17. Lat. 24 - 46.1 / Long. 80 - 45.6 :

Chart shows 14'. Survey shows irregular bottom with least depth of 14½' (34-5u-M) in vicinity.

18. Lat. 24 - 46.8 / Long. 80 - 45.6 :

Chart shows 15', and 17', about 0.4 mile east. Survey shows a long shoal within the 18' curve with least depth of 14' (143-4q-M) in vicinity of 15' charted sounding and 15½' (6-7a-M) in vicinity of the 17'.

19. Lat. 24-46.7/Long. 80-45.9 to Lat. 24-46.8/Long. 80-46.6 :

Chart shows 16' and 17' inside of 18' curve. Survey shows isolated ridge with least depth of 15½' (98-9q-M) in general depths of 20'. Area developed but not investigated.

20. Lat. 24 - 47.0 / Long. 80 - 45.9 :

Chart shows 11' here, 17' 0.4 mile east, and 11' 0.8 mile east. Survey shows a large shoal within 18' curve with general depths of 14-18' and least depths of 10' (9&llu-M), vicinity of charted 11' sounding, 11' (8u-M) in vicinity of charted 17' sounding, and 13' (56-57B*Red) vicinity of easterly charted 11' sounding. This 13' was not investigated. There is not indication of the 14' depth charted on the same shoal in Lat. 24-47.5/Long. 80 - 45.6 the least in the vicinity being 17'.

Bottom hrd S; a probable deepening is indicated by other soundings in the vicinity.

SHOALS AND DANGERS: (CONTINUED)

- ✓ 21. Lat. 24 - 47.7 / Long. 80 - 46.0 :

There is no indication of the charted 20' sounding. ✓
Least in vicinity is 23'. Area probably deepened.

- ✓ 22. Lat. 24 - 48.0 to 49.0 / Long. 80 - 45.0 to 46.0 :

This area indicated a deepening of 2-3' over charted depths. ✓

23. Lat. 24 - 49.5 / Long. 80 - 45.9 :

Chart shows 1' here. Area was investigated and found a large shoal with general depths of 2-3' and least depth of 1' (91b-S). It is separated from the shoal which projects from the shore and from shoal #24 by narrow channels. It is much more extensive than charted.

- ✓ 24. Lat. 24 - 49.9 / Long. 80 - 46.0 :

A shoal with a least depth of $1\frac{1}{2}$ ' (102b-S) was found here. It is small, rocky, and not shown on the present chart.

- ✓ 25. Shoals of Lat. 24 - 49.8 to shore / Long. 80 - 45.0 to 46.0 :

The shoals in this area are incorrectly charted. The outer limit of the shoal area is indicated by the ends of the sounding lines. The inner limit is the railroad fill. The shoal is broken between Channel Two and Channel Five by Channels Three and Four. ✓ From Channel Four, a dredged channel, not sounded out, parallel to the railroad fill, leads to Channel Five.

- ✓ 26. Lat. 24-44.8 / Long. 80-46.9 (Tennessee Reef Light):

The shoal on which the light is located is located in general depths of 21-22' and has a least depth of 13' (53x-M). ✓ A second shoal spot with a least depth of 14' (52x-M) is located 0.2 mile to the eastward. Both are within the four fathom curve.

- ✓ 27. Lat. 24 - 45.5 / Long. 80 - 46.5 :

The chart shows a 14' and a 17' sounding within the 18' curve. The survey shows irregular bottom with a least depth of $15\frac{1}{2}$ ' (17s-M) in the vicinity of the charted 14' and 17' in the vicinity of the charted 17' spot. A least depth of 17' (31-2u-M) was found on the same shoal in the vicinity of the charted 17' sounding in Lat. 24-45.8/Long. 80-46.0.

- ✓ 28. Lat. 24 - 46.0 / Long. 80 - 46.8:

Chart shows 18' on the ^{East} west end of a ridge. Area examined and found three shoal patches in general depths of 21-23' with least depths of 17' (134-5g-M) on south patch, 17' (17m & 4aa-M) on east patch and 17' (2aa-M) on west patch. ✓

SHOALS AND DANGERS: (CONTINUED)

29. Lat. 24 - 46.1 / Long. 80 - 46.3:

Chart shows 17'. Survey shows no indication of that depth in immediate locality but patches with 18' close by to the eastward. ✓

30. Lat. 24 - 46.5 / Long. 80- 46.8 :

Chart shows an isolated 17' spot. Survey shows no indication of the isolated shoal but there are two ridges one to the north and one to the south of the charted sounding with least depths of 16½' (95-6q-M) on south and 18' (84-5q-M) on north. *Generally deeper and shoal areas have shifted slightly in position.*

31. Lat. 24 - 46.6 / Long. 80 - 46.4 :

There is no indication of this charted 18' shoal. It probably is on shoal #19. *There is a general change in the bottom in this vicinity.*

32. Lat. 24 - 46.8 / Long. 80 - 46.8 :

Survey shows a small shoal with least depth of 17½' (137-8A-Red & 19u-M). Least charted depth is 19'. ✓

33. Lat. 24 - 47.2 / Long. 80 - 46.8:

Chart shows 17' on east end of tongue. Survey shows a patch with least depth of 17' (132-3k-M) in general depths of 19-21' - irregular bottom. ✓

34. Lat. 24 - 48.7 / Long. 80 - 46.5 ;

Chart shows an isolated 6' spot. Survey shows a sand patch with least depth of 5½' (39s-A). ✓

35. Lat. 24 - 48.8 / Long. 80 - 46.8:

A sounding of 3½' (107f-A) was obtained on a derelict tree grounded at this point. It was investigated (1c-D) and found the tree had sunk into the sand so that the depth over it was then 5'. It was probably removed by the hurricane of Sept. 2-3, 1935 and it is recommended it be not charted. *Shown as a snag on the sheet because there is no direct evidence that it has disappeared.*

36. Lat. 24 - 48.9 / Long. 80 - 46.1 :

Chart shows 4' on an isolated shoal. Area developed and found that shoal is outer end of long narrow bank within 6' curve. ✓
Least depth in vicinity 4½' (54e-A & 20-1k-M).

37. Lat. 24 - 49.5 / Long. 80 - 46.3 :

An isolated shoal bare at extreme low water and bare in spots at low water was found here with a good channel on either side. ✓
The chart shows 2' in this locality.

38. Lat. 24 - 49.8 / Long. 80 - 46.9 :

Chart shows two 13' soundings and a 11' sounding to the N.W. ✓
The area in this vicinity has filled.

SHOALS AND DANGERS: (CONTINUED)

39. Lat. 24 - 50.3 / Long. 80 - 46.9 :

An isolated shoal with a least depth of $3\frac{1}{2}'$ (49b-D) was found. It is not on the present chart.

Note: shoals north of Channel Five viaduct were described in Sheet No. 13.

40. Lat. 24 - 44.0 / Long. 80 - 48.0:

A trough with shoal patches to the north and south of it was found here. Least depths, upon investigation, are 41' (10-11-12bb-M) to the south and 39' (23aa-M) to the north. The seven fathom curve was drawn on the sheet for clearness. The two shoals and the trough are not on the present chart.

41. Lat. 24 - 45.3 / Long. 80 - 48.0 :

Chart shows a 17' isolated shoal. Area investigated and least depth in vicinity was found to be 23' (70-2w-M). See Review par. 7a.

42. Lat. 24-45.6 to 46.0 / Long. 80-47.0 to 48.0:

Area here is irregular bottom with numerous shoal patches of from 22-24'. It was developed but not investigated.

43. Lat. 24 - 46.1 / Long. 80 - 47.4:

Chart shows 17' at end of long ridge. Survey shows irregular bottom with two shoal patches having least depths of 18' (44-45B-Red) and 17' (43-44B-Red). Area probably deepened as least depth in position of charted 17' spot is 21'. Area developed but not investigated. *Bottom wh S & grass. Both shoals lie about $\frac{1}{5}$ mile west of the positions on the 1860 survey.*

44. Lat. 24 - 47.1 / Long. 80-47.3:

Chart shows 15'. Survey shows a shoal patch with a least depth of 15' (58z-M) and a second patch with a least depth of 17' (59-60z & 118-9f-M) about 0.1 mile to the southward.

45. Lat. 24 - 46.9 / Long. 80 - 47.6 :

A shoal patch with a least depth of $18\frac{1}{2}'$ (118-9d-M) was found here. General depth is 22'.

46. Lat. 24 - 47.5 / Long. 80 - 47.7:

Chart shows an isolated 12' shoal in vicinity of Bn. 30. Area developed and least depths found to be 13' (19b-M & 110-11 k-M) at beacon and $10\frac{1}{2}'$ (53-5z-M) at west end of charted 12' curve. It has been recommended to the Lighthouse Bureau that Bn. 30 be placed on this 10' spot.

47. Lat. 24 - 48.2 / Long. 80 - 47.7:

An isolated shoal with a least depth of $2\frac{1}{2}'$ (45s-A) in general depths of 5' was found.

SHOALS AND DANGERS: (CONTINUED)

48. Lat. 24 - 48.2 / Long. 80 - 47.2:

Chart shows 6' here and 6' 0.3 mile east both on an isolated shoal within the 6' curve. Survey shows isolated rocky shoal with a least depth of $5\frac{1}{2}$ ' (40-3s-A). General depths 8'. ✓

49. Lat. 24 - 48.8 / Long. 80 - 47.1:

A rocky isolated shoal with least depth of 1' was found. General depth is 4'.

Note: the shoals on the ocean side of the railroad south of Jewfish Bush Key are more extensive than charted. The channel west of Jewfish Key which was filled by the railroad has shoaled somewhat. The depths in Long Key Bight are about as charted. The rock bare at low water charted at Triangulation Station Hawk is within the low water curve. ✓

50. Lat. 24 - 44.5 / Long. 80 - 48.9:

Chart shows an isolated ^{shoal} shoal within the 18' curve with 16' on eastern end and 18' on western end. Survey shows western end has deepened to 19' and 20' and eastern end is a patch with least depth of $17\frac{1}{2}$ ' (37-8r-M). Area was investigated (122-7x-M) and nothing less found. Bottom is irregular.

51. Lat. 24 - 45.5 / Long. 80 - 48.5:

Chart shows 19'. Bottom is irregular with shoalest in vicinity 20' (140C-Red). There are additional 19' patches in Lat. 24-45/Long. 80-49 in irregular bottom. ✓

52. Lat. 24 - 47.7 / Long. 80 - 48.8:

A shoal with a least depth of $7\frac{1}{2}$ ' (23-4e & 34-5z-M) was found in general depths of 9-10'. Bottom is irregular. ✓

53. Lat. 24 - 48.0 / Long. 80 - 48.0:

A ridge in general depths of 7-9' was found. Least depths are 5' (47s-A) and $4\frac{1}{2}$ ' (119-20e-M). The ridge is probably continuous and not a series of shoal patches. ✓

54. Lat. 24 - 48.0 / Long. 80 - 48.5 to 49.0:

A number of shoal patches were found in general depths of 7-9'. Least depths are $4\frac{1}{2}$ ' (50z-M) and 5' (44z-M). Area was investigated (37-52z-M). Chart shows 5 & 6' within 6' curve in this area. ✓

55. Lat. 24 - 48.5 / Long. 80 - 48.8:

Survey shows a shoal with a depth of 2' (77-8 l - M). General depths are 5'. Shoal not investigated. ✓

Note: the 6' curve in this area is much different than charted. Area in general has deepened. ✓

SHOALS AND DANGERS: (CONTINUED)

56. Lat. 24 - 43.5 / Long. 80 - 49.0:

Two shoal patches with least depths of 60' (45-47y-M) were found. Area developed (14-25bb-M) and nothing less found. ✓

57. Lat. 24 - 44.1 / Long. 80-49.5:

Chart shows 19'. Area developed and least depth in vicinity found to be 21'. Bottom slightly irregular and probably deepened. ✓

58. Lat. 24 - 44.7 / Long. 80 - 49.3:

Chart shows a ridge with 17' at south end and 18' at north. Area developed and investigated and found depths at north end to be 19-20' and at south end 17½' (35-6r-M). Nothing less found on investigating (128-9x-M). *Deepening of about 1 foot is indicated, in this vicinity.* ✓

59. Lat. 24 - 45.7 / Long. 80 - 49.7:

Chart shows a ridge about 1.3 miles long with depths of 16' on its east end, 17' in the center and 18' on the west end. The west end has deepened (see shoals #69, 70) and the east end has a least depth, on development of 16' (104-5f-M) and 16½' (7-8x-M). Bottom in vicinity is irregular. *Chart is very much generalized, a slight deepening and shift in position of shoals is indicated by comparison with H-773 (1860). See par. 7 of the Review.* ✓

60. Lat. 24 - 49.1 / Long. 80 - 50.0 :

Two isolated ridges were found here, the northerly in the vicinity of a charted 17' sounding and the southerly in the vicinity of a charted 15' sounding. Area was developed and least depths found were 16½' (67-8z-M) on north and 16½' (128-9c & 70-lz-M). Bottom is irregular. ✓

61. Lat. 24 - 46.0 to 46.6 / Long. 49.3 to 50.0 :

The 18' curve in this area has receded toward shore. ✓

62. Lat. 24 - 47.0 / Long. 80 - 49.5:

The area has deepened in the vicinity of the 14' sounding to 16-18'. ✓

63. Lat. 24 - 47.5 / Long. 80 - 50.0:

Chart shows 11' within 12' curve. Survey shows an isolated ridge with least depth of 11½' (121-2g-M). ✓

64. Lat. 24 - 47.9 / Long. 80 - 49.1 to 49.7:

The area in the vicinity of these two charted 7' soundings has deepened and is very irregular (8-12'). *H-773 (1860) shows 7½ to 12 feet in this vicinity. Area deepened.* ✓

SHOALS AND DANGERS: (CONTINUED)

65. Lat. 24 - 43.1 / Long. 80 - 50.5:

Chart shows 19' here. Survey shows a shoal patch about 0.1 mile south with least depth of $18\frac{1}{2}$ ' (93t-M). Area investigated (66y-M) and nothing less found. Bottom irregular. ✓

66. Lat. 24 - 43.9 / Long. 80 - 50.5:

A patch with a least depth of $18\frac{1}{2}$ ' (33-4p-M) was found. Area investigated (33-4aa-M) and nothing less found. Bottom irregular. ✓

67. Lat. 24 - 44.3 / Long. 80 - 50.2:

Chart shows an isolated 17' spot. Area investigated and least depth obtained was $19\frac{1}{2}$ ' (35-6aa-M). ✓

68. Lat. 24 - 44.9 / Long. 80 - 50.9:

Chart shows 17' on ^{east} west end of a long east-west ridge. Area was investigated and found least depth to be 18' (102-3y & 117-8y-M). This 18' sounding was on a shoal patch with no indication of a ridge. ✓

~~Sounding 17'~~
17' from 4-773(1860) Surrounding depths differ similarly. Present survey adequate. It should be disregarded in charting.

69. Lat. 24 - 45.5 / Long. 80 - 50.1:

There is no indication of either the charted 19' or the charted 17' soundings in this vicinity. Area is irregular sandy bottom with general depths of 21-24'. Area has probably deepened (see also shoals #59 & #70). ✓

70. Lat. 24 - 45.6 / Long. 80 - 50.7:

Chart shows 18' on end of a long east-west ridge. Survey shows two shoal patches with least depths of $17\frac{1}{2}$ ' (lee & 2ee-M). General depths are 20-22' (See also shoals #59 & #69). ✓

71. Lat. 24 - 48.0 / Long. 80 - 48.0: ^{to 41.0}

This is an area of irregular bottom. A number of shoal patches which were investigated on (1-11d-D) and (59-60gg-M) are located in general depths of 5-7'. Bottom is sand and grass probably over rock. Least depths are from $1\frac{1}{2}$ ' to $5\frac{1}{2}$ '. ~~The depths are detailed on a tracing attached to the sheet.~~ The patches are not shown on the present chart. ✓

72. Lat. 24 - 47.1 / Long. 80 - 50.5 :

Chart shows 14'. Survey shows a least depth of $12\frac{1}{2}$ ' (11-13dd-M) in general depths of 15-16'. ✓

73. Lat. 24 - 43.0 / Long. 80 - 51.9:

A shoal patch with a least depth of $22\frac{1}{2}$ ' (34bb-M) was found in general depths of 26'. It is not on the present chart. ✓

SHOALS AND DANGERS: (CONTINUED)

74. Lat. 24 - 43.5 / Long. 80 - 51.8:

Chart shows an 11' shoal with 15' and 16' close by. Area was investigated and found a least depth of $11\frac{1}{2}$ ' (92cc-M). The west side of the shoal has deepened. ✓

75. Lat. 24-44.9 / Long. 80-51.5 (See also shoal #68):

Chart shows two 15' soundings in a long east-west ridge. Area was developed and least depth of 16' (122-3y-M) obtained. An investigation (130-3y-M) found nothing less. See Review par. 7c ✓

76. Lat. 24 - 45.3 / Long. 80 - 51.5:

Chart shows 19'. Survey shows a shoal patch with least depth of $17\frac{1}{2}$ ' (5-6ee-M). ✓

77. Lat. 24 - 45.9 / Long. 80-51.3 to 51.9:

Chart shows two 16' soundings inside of 18' curve in this area. Survey shows three shoal areas outside of 18' curve with least depths, upon investigation, of $17\frac{1}{2}$ ' (107-8dd-M) on southerly shoal, $17\frac{1}{2}$ ' (110-114-115dd-M) on easterly shoal and $17\frac{1}{2}$ ' (51-2aa & 103dd-M) on northwesterly shoal. Bottom is irregular. ✓

Some change in details. See Review par 7 general statement.

78. Lat. 24 - 46.3 / Long. 80 - 51.5:

Chart shows 13'. Area developed and least depth in vicinity found to be 14'. ✓

79. Lat. 24 - 46.8 / Long. 80 - 51.5:

The 12' curve projects further south than charted. The point of the shoal was developed and investigated and a least depth of $10\frac{1}{2}$ ' (18dd-M) found within the curve. This point seems to be building out. ✓

80. Lat. 24 - 48.0 / Long. 80 - 51.4:

Chart shows 6' within 6' curve. Survey shows a large isolated shoal with general depths of 4-5' and least of 2' (57gg-M). ✓

81. Lat. 24 - 48.0 to 48.5 / Long. 80 - 51.0 to 52.0:

The chart shows two isolated shoals north of the viaduct with least depths of 5' (east) and 6' (west). The area was investigated and found a number of shoal patches with least depths of from $3\frac{1}{2}$ ' to $6\frac{1}{2}$ ' (16-45gg-M). ~~These are shown on the tracing attached to the sheet.~~ The depth curves are correct as shown and were checked against the air photos. The bottom is irregular from 7-12'. ✓

SHOALS AND DANGERS: (CONTINUED)

82. Lat. 24 - 42.5 / Long. 80 - 52.8:

Chart shows 20'. Area investigated and least depth of 20' (141cc-M) found about 0.1 mile south. ✓

83.. Lat. 24 - 42.8 / Long. 80 - 52.8:

Two patches with least depths of 18' (22A-Blue) and (144cc-M) were found. General depths 20-23' and irregular bottom. Not shown ✓ on present chart.

84. Lat. 24 - 43.5 / Long. 80 - 52.9:

Chart shows 21'. Area developed and found a large sandy shoal with general depths of 22' and least of 20' (41-2A-Red). ✓ Located on north side of a deep tongue.

85. Lat. 24 - 44.0 / Long. 80 - 53.0:

Chart shows 24'. Area apparently deepened as the least depth in the vicinity is 27'. The point of the 24' curve with a least depth (in the locality) of 21' (82A-Red) lies 0.2 mile east. ✓

86. Lat. 24 - 45.8 to 46.2 / Long. 80 - 52.2 to 53.0:

Chart shows a long ridge within the 12' curve with a 12' sounding. Area investigated (63-93dd-M) and found a number of shoal patches with least depths of 12' (66&72dd) on northwesterly, 12' (75-6dd) and 11½' (80dd) on southwesterly and 12' (133-4j & 43-44dd-M). Bottom is irregular (12-17').

87. Lat. 24 - 46.5 / Long. 80 - 52.0 to 52.4:

The line from (134-6g-M) was rejected as the soundings were undoubtedly called 1 to 2 fathoms in error. Area was investigated (129-132j-M). ✓

88. Lat. 24 - 47.0 / Long. 80 - 52.9:

Chart shows 3' within 6' curve. Area investigated and found a sand shoal about 0.1 mile north with a least depth of 1' (96 l -A). ✓ Shoal is isolated in general depths of 4-5'.

89. Shoals north of viaduct west of Long. 80 - 52.0:

There are six shoal banks in this area, five of which are indicated on the chart. These were examined on (gg) day (M) and (e) day (D) and depths are as follows:

(a) Lat. 24-48.1 / Long. 80-52.2:

This bank is irregular and has a number of shoal patches - general depth is 4-5' and least 1' (7-8gg-M) on north section, 4½' (11 & 15gg-M) on south.

SHOALS AND DANGERS:(CONTINUED)

88. (Continued):

(b). Lat. 24 - 48.0 / Long. 80 - 52.5:

The bank is also irregular. It has a least depth of $\frac{1}{2}$ ' (20e-D). Shoal is outlined by 3' and 6' curves.

(c). Lat. 24 - 47.9 / Long. 80 - 52.9:

This bank is long and narrow and is marked on its northern end by an iron pipe (19 l -A) which bares 3'. Least depth is 0.8' (27e-D). Shoal is outlined by 3' curve.

(d). Lat. 24 - 47.8 / Long. 80 - 53.0:

This bank is outlined by positions 28-32e-D. It bares at low water and has general depths of $\frac{1}{2}$ ' at M.L.W.

(e). Lat. 24 - 47.8 / Long. 80 - 53.2:

This bank is outlined (on its west side) by positions 33-5e-D. It bares at L.W. (33e) and has general depths of $\frac{1}{2}$ ' at M.L.W.

(f). Lat. 24 - 47.6 / Long. 80 - 53.2:

This bank is outlined by positions 36-41e-D and has a least depth of $\frac{1}{2}$ '.

These banks and also those described in shoals #80 & #81 are called locally Conch Key Banks - the name particularly applies to the above six.

90. Lat. 24 - 42.1 / Long. 80 - 53.7:

Charts shows a long ridge within the 18' curve with a depth of 17'. Area was investigated and found a small ridge with a least depth of 15' (74bb-M) in the center of the charted ridge and a shoal patch with a least depth of 18 $\frac{1}{2}$ ' (78r & 63bb-M) on west edge of charted ridge. General depths 21-4'.

91. Lat. 24 - 42.3 / Long. 80 - 53.9:

Two patches with least depths of 18' (19 & 21A-Blue) were found. General depths 20-2', bottom irregular. Not on present chart.

SHOALS AND DANGERS: (CONTINUED)

92. Lat. 24-43.5 to 43.8 / Long. 80-53.2 to 53.6 :

This area has irregular bottom with several shoal patches. It was investigated and seven patches with least depths of 16½' to 18½' (145-164cc-M) found. Least depth on chart is 19'. General depths 20-23'.

93. Lat. 24 - 44.4 / Long. 80 - 54.0 :

Chart shows 22'. Area examined and found three coral heads with depths of 22½' (178-9cc-M) and 20½' (180cc-M). General depths 26-28'.

94. Lat. 24 - 41.8 / Long. 80 - 54.5 :

Chart shows an isolated 18' shoal with 21' close by to the eastward. Area investigated (10-17ff-M) and least depth of 18½' (16-17ff-M) found in vicinity, on a ridge at the edge of the shelf with general depths of 22-23'.

95. Lat. 24 - 42.0 / Long. 80 - 54.1 :

A shoal with a least depth of 22' (3ff-M) was found. General surrounding depths 25-26'. Not shown on present chart.

96. Lat. 24 - 42.3 / Long. 80 - 54.3 :

There is no indication of the charted 21' sounding. Least in vicinity is 23' with 21' 0.3 mile to the northeast. Area probably deepened.

97. Lat. 24 - 42.9 / Long. 80 - 54.7 :

Chart shows an isolated 30' shoal. Least depth obtained was 30½' (197-8A-Red). Nothing less was found upon investigation, (7-10hh-M).

98. Lat. 24 - 43.8 / Long. 80 - 54.7 :

A rocky patch with a least depth of 22' (72gg) was found. General depths 30'. Not on chart, shoal very small.

99. Lat. 24 - 44.0 / Long. 80 - 54.8:

Chart shows an isolated 14' shoal. Area investigated and found a small rocky shoal with several coral heads with least depths of 8' (63gg), 10' (61-2-4gg), 11' (61gg), 12' (65gg) and 14' (66gg). The coral heads are from 4-10' above the bottom.

100. Lat. 24 - 44.2 / Long. 80 - 54.9:

There is no indication of the 21' charted sounding. Least in the vicinity is 23½' (60ee-M). O.K. Probably deepened.

SHOALS AND DANGERS: (CONTINUED)

101. Lat. 24 - 42.0 / Long. 80 - 55.1 :

A patch with a least depth of $20\frac{1}{2}$ ' (24ff-M) was found. General depths 23'. Not on present chart.

102. Lat. 24 - 42.4 / Long. 80 - 55.5

A short ridge with a least depth of 23' (14-16hh-M) was found. General depths 27-31'. Not on present chart.

103. Lat. 24 - 43.3 / Long. 80 - 55.2 :

Two isolated coral heads with least depths of 18' (87-8gg-M); were found. General depths 33-34'. Not on present chart.

104. Lat. 24 - 43.5 / Long. 80 - 55.1 :

Chart shows an isolated 13' shoal. Area investigated and found a number of isolated coral heads within the 24' curve with least depths of 15' (80gg) on west group, 13' (83gg) on center, 12' (84gg) on north group, and 13' (86gg) on east.

105. Lat. 24 - 43.7 / Long. 80 - 55.2 :

Chart shows 21'. Area investigated and a coral head with least depth of 17' (79gg) found. General depths 26'.

106. Lat. 24 - 43.3 / Long. 80 - 55.9 - East Turtle Shoals.

The chart shows a 5' depth on the south end and 12' on the north end of this shoal. It was investigated and found to consist of two separated shoals.

See part 7b, review.

The south and larger section consists of a number of coral heads at the 18' curve on the south edge of the shoal and additional shoal patches enclosed within the 18' curve. Least depths are $11\frac{1}{2}$ ' (92gg) on east edge, $9\frac{1}{2}$ ' (95gg) on south central (also least on shoal), 12' in center and 18' on north edge. General depths are 15-17'.

The north shoal on which is located Beacon #45 has a least depth of $11\frac{1}{2}$ ' (103gg-M) on a coral head.

107. Lat. 24 - 43.9 / Long. 80 - 56.0 :

Chart shows 14' on a ridge within the 18' curve. Area investigated and found least depths of $13\frac{1}{2}$ ' (105-9gg-M).

108. Lat. 24 - 44.2 / Long. 80 - 55.5:

Chart shows isolated 18' sounding. Area investigated and found least depth of $19\frac{1}{2}$ ' (49-50ee-M) on two shoal patches.

Bottom wh S, probably deepened slightly.

SHOALS AND DANGERS: (CONTINUED)

109. Lat. 24 - 44.5 / Long. 80 - 55.0 :

The area in the vicinity of the 19' charted sounding has deepened. ✓
20 + 0 21 ft.
on survey.

110. Lat. 24 - 45.0 / Long. 80 - 55.9 :

This isolated 12' sounding is probably within the 12' curve. ✓

111. Shoals - Tom's Harbor: ✓

The shoals in this area are numerous and are either large banks bare at L.W. or small rocks and coral heads. The area was sounded out on (f) to (k) days (Denny) and are fully described in the record. The shoals are also detailed on a tracing attached to the sheet. The banks show very clearly on the air photographs and may be shown in true outline on the compilations. ✓

The area is considerably different than charted due to dredging at the time the railroad was built and natural changes occurring from the blocking up of several natural channels from the ocean to the bay. ✓

CHANNELS AND HARBORS:Channel Two:

Channel Two is a natural bridged channel from the Ocean to the Bay. Controlling depth in the channel is 11' but only 8' may be taken through the ocean approach. Size of craft using it is limited by the fixed railway viaduct. Care should be taken to avoid the 5' shoal on the east side. ✓

Channel Five:

(near Jewfish Key)

Channel Five is a natural channel crossed by a viaduct and drawbridge. The ocean entrance is marked on the west side by a finger beacon. ✓

The depths in the channel proper are ample for any vessel capable of entering. Controlling depths on the bay side is 9' and on the ocean side 7'. However, with local knowledge a draft of 9' may be taken from the ocean. ✓

The following directions from Hawk Channel are recommended:

Follow Hawk Channel course until Bn. #1 is on range with the west end of Channel Five viaduct. ✓

CHANNELS AND HARBORS: (CONTINUED)Channel Five: (Continued)

From:	To:	Course (T)	Dist. (Naut.)	Controlling Depth
1. Hawk Channel	Bn. #1	3540	1.0	10'
2. Bn. #1	Abeam bank east side channel	50	0.8	7'
3. Bank	Drawbridge	220	0.6	9'

Note: before reaching Bn. #1 turn and leave the beacon close by (100 yds) heading for a point about half way between the west end of the viaduct and the drawspan. The bank at the turn shows very well but should the water be cloudy follow course (2) until close by the viaduct then turn.

Caution: a strong current sometimes sets through the channel and a stranger should navigate with care.

The left span is now left open at all times and forms a prominent landmark.

Other channels between Channel Two and Five:

Small craft may go into the railroad fill on the ocean side of Channel Three and may follow a bridged channel on the south side of the railroad fill from Channel Five to the ocean side of Channel Four. This dredge out was not sounded out but from reports and an inspection of the photographs is good for not less than 6'.

The chart is the best guide for navigation in this vicinity. If the sun be high the shoals are easily seen.

Channels - Long Key Viaduct:

There are no marked channels through Long Key Viaduct and the chart is the best guide. No local knowledge is necessary if the sun be high and the water clear as the shoals, under these circumstances, show very well.

Small craft pass through near the east end of the viaduct skirting along the shoals off the south point of the key and passing close by the abutment.

The fishing camp at Long Key has been completely destroyed and abandoned.

A strong current sets through the viaduct and there are swirls in the vicinity of the shoals.

The size of boats is limited by the fixed arches. The controlling depths are 5' on the east end and 7' on the west. With local knowledge a greater draft may be taken.

CHANNELS AND HARBORS: (CONTINUED)

Toms Harbor: Lat. 24°46'
Long. 80°36'

Toms Harbor is a natural harbor lying northwest of Duck Key and is very well protected by banks and keys. It is used as a harbor of refuge by small fishing craft. The name is loosely applied but is generally interpreted to mean the waters enclosed by Duck Key, Toms Harbor Keys, and the railroad.

The harbor is entered by three different channels from the ocean side, one from the bay side and one which runs from the east parallel to the fill. It is subdivided into two sections by a bank north of Duck Key.

Local knowledge is almost essential to enter this harbor. Rocks and coral heads abound in the ends of the channels and extreme caution should be used.

West entrance:

This channel divides into two sections, one passing west of Toms Harbor Keys, and the other between them. Two crossovers connect them south of Little Toms Harbor Keys.

Controlling depths are as follows:

(a) In ocean entrance	5' ✓
(b) West branch	4' ✓
(c) East branch	1' ✓
(d) South crossover	5' ✓
(e) North crossover	4' ✓

Center entrance:

This channel passes between Toms Harbor Keys and Duck Key passing close by the west point of Duck Key.

Controlling depths:

(a) Ocean entrance	3' ✓
(b) Harbor entrance	3' ✓

East entrance:

This entrance passes close by the east point of Duck Key and branches northeast of it, the west branch leading directly to the harbor and the east branch to the dredged channel which parallels the railroad.

Controlling depths:

(a) Ocean entrance	2' ✓
(b) West branch	4' ✓
(c) East branch	5' ✓

CHANNELS AND HARBORS: (CONTINUED)Toms Harbor: (Continued)Bay entrance:(Toms Harbor Viaduct - West)

This viaduct allows passage between the bay and the harbor. It is foul close to the viaduct and although 8' may be carried through ~~the viaduct~~ numerous rocks at the viaduct call for extreme caution or local knowledge. Size of boats is limited by the fixed viaduct.

Channels parallel to South side of railroad:

During the construction of the railroad a channel was dredged from Toms Harbor Viaduct (west) parallel to the railroad in order to obtain spoil for fill. It connects the two sections of the harbor and the channels and extends as far east as Little Conch Key.

Controlling depths are:

- | | |
|-------------------------------------|----|
| (a) Between two sections of harbor | 6' |
| (b) Between the two viaducts | 5' |
| (c) East of Duck Key Viaduct to end | 4' |

General:

The west and center channels lead to the western section of the harbor which has general depths of 4-5' but is not as well protected as the east section. The west branch of the west entrance is the main channel and the shoals at its harbor entrance are usually marked by private stakes. The east section of the harbor is an excellent anchorage with general depths of 5-6' and good holding ground.

A strong current may be encountered in the various channels and particularly through the viaduct.

Channels between Duck Key and Little Conch Key: Lat. 24°47'
Long. 80°54'

There are five channels which pass between these two keys and thence to Duck Key Viaduct (Toms Harbor Viaduct #1 or Toms Harbor Viaduct - east). None are marked. The chart is the best guide and local knowledge is desirable.

The channels are:

(a) East channel:

This channel is wide and leads from the ocean to the viaduct in a wide sweep passing east and north of a large bank. It is divided longitudinally from its ocean entrance to the railroad by a series of grass covered rocks.

Controlling depths are 5' in east side and 4' in west side to the railroad then 8' in the dredged cut to the viaduct.

It should be navigated with caution as it is foul.

CHANNELS AND HARBORS: (CONTINUED)Channels between Duck Key & Little Conch Key : (Continued)(b) East central:

This channel leads directly to the viaduct and in the main channel. It is usually marked by private stakes. It leads between rocks on the west side and a bank on the east. Controlling depth is 4'.

(c) Other channels:

The three westerly channels are seldom used. They are narrow and lead between shoal banks to the viaduct. Controlling depths are 2-3'.

Duck Key Viaduct:

This viaduct is called locally by this name. It is also called Toms Harbor Viaduct #1 and Toms Harbor Viaduct East. It affords passage into the bay.

The area in the vicinity of the viaduct is foul and although 7' may be carried through local knowledge or extreme caution is essential. *A STRONG CURRENT MAY BE ENCOUNTERED.*

Note: The area in the vicinity of Toms Harbor Keys, Duck Key and Little Conch Key is detailed on a tracing attached to the sheet and is fully covered by notes in the record. The outlines of the shoals as shown on the boat sheet were modified by reference to the air photos upon which the limits of the bank are very well defined.

Hawk Channel:

This channel extends the full length of the sheet. It is used considerably by yachts, fishing boats and the lighthouse tender, the draft of the average boat using it is from 6' to 8' and the draft of the largest 10'. The depth is ample for any boat using it at present.

Directions: (see also sheet 12B)

- | | | | | |
|----|-------------|--------------------|--------|-----|
| 1. | To 200 yds. | 145° T from Bn. 30 | 240° T | 9.1 |
| 2. | To 300 yds. | 15° T from Bn. 45 | 244° T | 8.7 |

Bn. 30 is $\frac{1}{2}$ mile W.x N. of a 10' shoal. Bn. 45 marks the north edge of East Turtle Shoals.

ANCHORAGES:

The principal anchorages are Toms Harbor which was described under (Harbors) and Long Key Bight.

Long Key Bight is used by local fishermen and spongers and is well

ANCHORAGES: (CONTINUED)

protected except from the east. The chart is the best guide for entering. Anchorages may be had anywhere. Small craft anchor as far inside as possible.

LANDMARKS:

These will be taken up in the topographic sheet for this area.

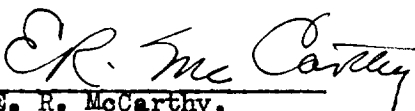
GEOGRAPHIC NAMES:

Some names will be found in the report of "Geographic Names" - Key Largo to Long Key. The others will be taken up in a special report on that subject. Will established names already charted were penciled on the sheet. Other names not charted are placed on an overlay name sheet.

MISCELLANEOUS:

The hurricane of Sept. 2-3, 1935 did considerable damage to the area covered by the sheet. As there has been no opportunity for examination the extent is not known.

Respectfully submitted:


E. R. McCarthy,
Lieut.(j.g.) C&GS,
Chief of Party.

MEMORANDUM BY CHIEF OF PARTY

1 The sheet is complete except for the channel on the south side of the fill east of Channel Five. This shows on the air photos and will be outlined on the compilations. ✓

2 It will be possible to get exact outlines of shoal banks on the air photo compilations. ✓

3 Toms Harbor was well developed, probably more so than its importance warranted. It was not felt that a 1:10,000 smooth plotting was warranted in view of the fact that, should it ever be used as a harbor of refuge, considerable improvement and the removal of the rocks and coral heads will be necessary. ✓

4 The parties operated out of Tavernier, the base office being in Miami, 75 miles north, and the records were examined every week or two weeks. There were three hydrographic and one topographic parties in operation during February and March.

5 The reveiwer should bear in mind that bottom, under ordinary conditions, is visible up to 30' and with good conditions, up to 50'. A chop decreases visibility somewhat and a cloudy day considerably. ✓

6 The survey shows considerable change in places from the chart especially in the location of the depth curves and the deepening of some sections of the area.

7 The damage done by the Sept. 2-3 hurricane is not known - it may have changed the sand areas somewhat.

~~The shoreline was left in pencil because of probable changes in the locality.~~

E. R. McCarthy

E. R. McCarthy,
Lieut. (j.g.) C&GS,
Chief of Party.

STATISTICS

PROJECT HT 158

FLORIDA KEYS

HYDROGRAPHIC SHEET

NO. 14 H 5952 (1935)

LAUNCH MARIE

DAY	DATE	MILES (STATUTE)	SOUNDINGS	POSITIONS	DAYS RUN (MILES)	DISTANCE TO & FROM WORK
g	3-25-35	20.4	506	108	41.8	17.9
g	3-26-35	41.5	1065	224	50.5	7.0
g	3-27-35	28.0	731	158	39.7	7.7
g	3-28-35	38.0	930	198	47.4	7.4
g	3-29-35	25.5	819	138	32.2	5.7
h	4-1-35	27.8	698	152	39.0	7.3
h	4-2-35	38.0	1198	202	51.0	11.0
h	4-3-35	25.5	844	157	42.7	11.2
h	4-4-35	27.0	881	159	47.5	15.5
h	4-5-35	24.2	827	167	28.1	6.9
h	4-6-35	16.5	575	105	31.2	9.7
h	4-25-35	26.0	512	131	41.5	9.5
h	4-26-35	38.0	934	187	49.6	9.6
h	4-27-35	11.5	312	58	33.6	11.9
h	4-29-35	32.3	972	168	46.5	11.2
h	4-30-35	36.0	982	181	55.4	9.6
i	5-1-35	42.0	938	199	53.6	10.6
i	5-2-35	25.7	570	133	45.2	18.5
i	5-8-35	16.7	493	108	39.2	14.5
i	5-13-35	8.2	166	47	39.2	31.0
i	5-14-35	33.2	730	191	49.2	8.5
i	5-15-35	25.5	599	161	45.3	6.8
i	5-16-35	21.0	525	153	41.5	9.5
i	5-17-35	7.0	260	77	18.5	2.5
i	5-20-35	6.7	212	60	26.2	7.5
i	5-21-35	23.0	600	153	57.5	13.5
i	5-22-35	24.7	710	177	46.2	9.5
i	5-23-35	18.0	765	180	37.0	8.0
i	5-24-35	6.2	230	61	37.7	31.5
i	5-28-35	5.0	182	53	17.0	6.0
i	5-29-35	1.6	147	109	33.6	9.0
h	6-5-35	1.5	43	18	----	6.0
TOTALS		722.2	19956	4373	1274.6	352.0

STATISTICSPROJECT HT 158FLORIDA KEYSHYDROGRAPHIC SHEET NO. 14 H 5952(1935)LAUNCH AMALIE

DAY	DATE	MILES (STATUTE)	SOUNDINGS	POSITIONS	DAYS RUN (MILES)	DISTANCE TO & FROM WORK
p p p p p p p p p p p p p	4-8-35	12.0	345	64	20.8	5.5
	4-9-35	26.5	753	158	32.7	4.0
	4-10-35	5.9	137	27	20.9	7.0
	4-12-35	10.2	282	70	19.7	2.5
	4-13-35	12.9	387	96	38.2	5.5
	4-15-35	21.0	632	153	28.2	5.0
	4-16-35	17.2	520	132	36.9	4.0
	4-17-35	11.7	345	87	31.5	5.0
	4-24-35	11.6	349	68	25.4	4.0
	4-25-35	25.8	855	216	41.3	11.0
	4-26-35	13.3	427	114	33.3	17.5
	4-27-35	14.1	405	88	25.4	5.0
	p p p p p	5-1-35	11.7	347	63	31.2
5-2-35		6.6	193	35	24.5	14.5
5-3-35		6.8	212	40	22.8	12.5
5-6-35		14.6	540	107	21.1	2.5
5-8-35		3.6	99	52	14.4	7.0
TOTALS		225.5	6828	1570	468.2	126.0

DENNY LAUNCH

p p p p p	5-14-35	17.8	527	100	54.8	2.5
	5-15-35	6.5	272	49	10.3	1.3
	5-17-35	11.3	541	99	24.2	9.0
	5-28-35	---	22	13	8.0	8.0
	5-30-35	2.8	119	45	10.7	0.0
p p p p p p	6-11-35	6.3	299	62	10.2	2.6
	6-12-35	15.1	722	153	20.9	3.8
	6-13-35	15.7	700	148	25.8	3.0
	6-18-35	12.1	565	121	24.1	2.0
	6-19-35	6.8	288	68	12.0	3.5
	6-20-35	14.4	634	103	21.2	3.5
TOTALS		108.8	4689	961	222.2	42.2

STATISTICSPROJECT HT 158FLORIDA KEYSHYDROGRAPHIC SHEET NO. 14 H 5952(1935)LAUNCH RODGERS

DAY	DATE	MILES (STATUTE)	SOUNDINGS	POSITIONS	DAYS RUN (MILES)	DISTANCE TO & FROM WORK
A	4-4-35	44.0	863	204	49.5	5.5
B	4-5-35	14.5	349	64	27.7	5.5
C	4-6-35	34.3	567	142	46.8	10.0
TOTALS		92.8	1779	410	124.0	21.0

LAUNCH MARINDIN

A	5-28-35	2.0	76	24	24.7	22.7
---	---------	-----	----	----	------	------

SKIFF

P P P	5-6-35	2.1	104	25	2.5	4.7
	5-7-35	10.4	467	112	6.0	19.9
	5-8-35	1.0	45	10	8.5	9.5
TOTALS		13.5	616	147	17.0	34.1

STATISTICSPROJECT HT 158FLORIDA KEYSHYDROGRAPHIC SHEET NO. 14 # 5952(1935)RECAPITULATION

BOAT	MILES (STATUTE)	SOUNDINGS	POSITIONS	DAYS RUN (MILES)	DISTANCE TO & FROM WORK
LAUNCH MARIE	722.2	19,956	4,373	1,274.6	352.0
LAUNCH AMALIE	225.5	6,828	1,570	468.2	126.0
DENNY LAUNCH	108.8	4,689	961	222.2	42.2
LAUNCH RODGERS	92.8	1,779	410	124.0	21.0
LAUNCH MARINDIN	2.0	76	24	24.7	22.7
SKIFF	13.5	616	147	17.0	34.1
TOTALS	<u>1,164.8</u>	<u>33,944</u>	<u>7,485</u>	<u>2,130.7</u>	<u>598.0</u>

Field Records Section (Charts).

HYDROGRAPHIC SHEET NO. ..H5952 (1935)

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	7485
Number of positions checked	37
Number of positions revised	None
Number of soundings recorded	33,944
Number of soundings revised	71
Number of signals erroneously plotted or transferred	None

Date: 16 Feb., 1937
Verification by G. C. McGlown
Review by R. J. Christman

Time: 24 days 4 1/2 hours
Time: 47 hrs

HYDROGRAPHIC SURVEY NO. 5952 (1935)

Smooth Sheet Yes

Boat Sheets 2

Sounding Records Yes Vols. 28

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol. 1

Landmarks for Charts (Form 567) No

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) No

Special Chart for Lighthouse Service
(Circular Nov. 30, 1933) No

Remarks _____

H5952

Remarks

Decisions

	Remarks	Decisions
1		
2		
3		
4		
5		
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GEOGRAPHIC NAMES

Survey No. 5952 (1935)

On Chart No. 1250
 On previous Survey No. ~~1250~~
 On U. S. Quadrangle Maps
 From local information
 On local Maps
 P. O. Guide or Map
 Rand McNally Atlas
 U. S. Light List
 USGS Index 1290

Name on Survey	A	B	C	D	E	F	G	H	K	
o Grassy Key ✓	*									1
d East Turtle Shoal ✓	*									2
o Duck Key ✓	*									3
o Conch Keys ✓	*									4
b Hawk Channel	*							✓		5
o Long Key ✓	*								✓	6
o Atlantic Ocean ✓	*								✓	7
o Tom's Harbor Keys	*									8
o Tennessee Reef *	*							✓		9
To here 4/15/36										10
o ✓ Tom's Harbor				S.S.						11
o ✓ " " Cut										12
o ✓ " " channel										13
b ✓ Channel Key ✓	✓									14
o ✓ Conch Key Channel										15
o ✓ Long Key Viaduct ✓	✓									16
o ✓ " " Fishing Camp ✓	✓									17
o ✓ " " Bight				✓						18
o ✓ " " Point										19
o ✓ Jewfish Key ✓	✓									20
o ✓ Channel Five				✓						21
o ✓ " Two				✓						22
o ✓ Matecumbe Harbor				✓						23
o ✓ Lower Matecumbe Key	✓									24
o Duck Key channel										27

Names underlined in red approved
 by *[Signature]*
 on 7/15/36

14 additional names
 7-11-38
[Signature]

7-13-39
[Signature]

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
PHOTOSTAT OF

} No. H 5952
No. T

{ received March 10, 1936
registered March 17, 1936
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE	Initial	Attention called to
20		
22		
24		
25		
✓ 26	<i>JAG</i>	<i>Pages 17 to 21 - P.R.</i>
30		
40		
62		
63		
82		
83		
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90		

RETURN TO

82	
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C. K. Green March 19, 1936.

KUC

TIDE NOTE FOR HYDROGRAPHIC SHEET

September 9, 1936.

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. E. P. Ellis

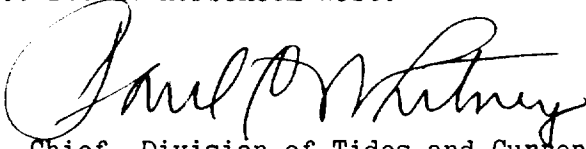
Plane of Reference
~~Tide Reductions~~ approved in
28 volumes of sounding records for

HYDROGRAPHIC SHEET 5952

Locality Lower Matecumbe ^{Key} to Grassy Key, Florida Keys

- Chief of Party: E. R. McCarthy in 1935
- Plane of reference is mean low water reading
- 2.2 ft. on tide staff at Whale Harbor
- 11.2 ft. below B.M. 1
- 2.7 ft. on tide staff at Sombrero Key
- 16.6 ft. below B.M. 2
- 1.9 ft. on tide staff at Channel Five
- 4.8 ft. below B.M. 1
- 3.1 ft. on tide staff at Tennessee Reef Lt.
- 9.2 ft. below B.M. 1
- 1.7 ft. on tide staff at Long Key (outside)
- 3.3 ft. below B.M. 1
- 3.7 ft. on tide staff at Long Key (inside)
- 2.6 ft. below B.M. 1
- 3.7 ft. on tide staff at Toms Harbor
- 3.2 ft. below B.M. 1
- 1.4 ft. on tide staff at Horseneck West
- ~~Condition of records satisfactory except as noted below~~
- 0.4 ft. below B.M. 1

Height of mean high water above plane of reference is 2.1 ft. at Whale Harbor; 1.6 ft. at Sombrero Key; 1.3 ft. at Channel Five; 1.8 ft. at Tennessee Reef Lt., 1.9 ft. at Long Key (outside); 0.9 ft. at Long Key (inside); 0.8 ft. at Toms Harbor; 1.3 ft. at Horseneck West.


Chief, Division of Tides and Currents.

The gauge established at Whale Harbor was used as standard up to May 10 after which Sombrero Key was used. The limits of the interpolated sections are shown on the boat sheet.

TIDE GAUGES:

WHALE HARBOR: Lat. 24 - 56.2 / Long. 80 - 36.9 M.L.W. 2.2

This was ^{used} used as a standard for the sheet until May 10.

SOMBRERO KEY: Lat. 24 - 37.6 / Long. 81 - 06.7 M.L.W. 2.7

This was used as a standard for the sheet after May 10.

CHANNEL FIVE: Lat. 24 - 50.0 / Long. 80 - 46.0 M.L.W. 1.9

This was used in conjunction with Whale Harbor for reducers in its immediate locality.

TENNESSEE REEF LIGHT: Lat. 24-42.7 / Long. 80-47.0 M.L.W. 3.1

This gauge was used for some missing tides at Whale Harbor.

LONG KEY (OUTSIDE): Lat. 24 - 48.1 / Long. 80 - 50.8 M.L.W. 1.7

This gauge was used only to determine the amount of drop in range through the viaduct.

LONG KEY (INSIDE): Lat. 24 - 48.3 / Long. 80 - 50.9 M.L.W. 3.7

This gauge was used to determine reducers for its immediate locality and in conjunction with the ocean tides to obtain reducers for areas east of Duck Key Viaduct.

TOMS HARBOR: Lat. 24 - 46.5 / Long. 80 - 55.5 M.L.W. 3.7

This gauge was used to obtain reducers in Toms Harbor and - in conjunction with Horseneck West - for reducers through the Toms Harbor Viaduct.

HORSENECK WEST: Lat. 24 - 48.8 / Long. 81 - 00.7 M.L.W. 2.4

This gauge was used as stated above.

Computations are attached. Tide curves for reduction of soundings are filed with the sheet.

16 February, 1937.

Report on H 5952
Verifying and Inking

1. The records conform to the requirements of the General Instructions.
2. The usual depth curves can be completely drawn within the limits of the sheet. The one half foot was added to the six, twelve, eighteen, and thirty foot soundings when justified, in order to smooth the one, two, three, and five fathom curves respectively.
3. The field plotting was completed to the extent prescribed in the Hydrographic Manual.
4. The office draftsman did not have to do over any part of drafting done by field party except as noted on the statistic.

sheet.

5. The junction with contemporary adjacent sheets were found to be satisfactory.
6. The Chief of Party states in the Descriptive Report that Beacon I was destroyed by the hurricane of Sept. 2-3, 1935 and only the stump remained projecting about three feet above the water. He further states that the U.S. Lighthouse Service plans to pull the stump and not replace it. However this beacon was replaced under date of April 17, 1936, and is shown as such on the smooth sheet.
7. In lat. $24^{\circ} 48.8'$, long. $80^{\circ} 46.8'$.
There is a derelict ~~tree~~ tree grounded at this point and the Chief of Party recommends that it be omitted from the chart as he states that this tree probably was removed by the hurricane of Sept. 2-3, 1935. Inasmuch as there is some doubt about this derelict it ~~(was)~~ was shown on the smooth sheet as the records direct.
8. In volume 16, page 25, position 25 b, lat $24^{\circ} 49.5'$, long $80^{\circ} 44.6'$.

sheet.

5. The junction with contemporary adjacent sheets were found to be satisfactory.
6. The Chief of Party states in the Descriptive Report that Beacon I was destroyed by the hurricane of Sept. 2-3, 1935 and only the stump remained projecting about three feet above the water. He further states that the U.S. Light House Service plans to pull the stump and not replace it. However this beacon was replaced under date of April 17, 1936, and is shown as such on the smooth sheet.
7. Lat. $24^{\circ} 48.8'$, Long. $80^{\circ} 46.8'$.
There is a derelict ~~tree~~ tree grounded at this point and the Chief of Party recommends that it be omitted from the chart as he states that this tree probably was removed by the hurricane of Sept. 2-3, 1935. Inasmuch as there is some doubt about this derelict it ^(smo.) was shown on the smooth sheet as the records direct.
8. In volume 16, page 25, position 25b, Lat $24^{\circ} 49.5'$, Long $80^{\circ} 44.6'$.

were found to exist.

Respectfully submitted,

S. C. McElwain

made it exceedingly difficult to
into soundings and make them
legible.

Respectfully submitted,
G. C. Mc Gossou.

22 June, 1938.

Report on H 5952
Verifying and Inking

1. The shoreline on this sheet was transferred by Mr. Eiberman and checked by E. C. McGowan. The soundings which were left in pencil were inked and verified.

The shoreline was taken from T 5541 (1935) and T 5542 (1935).

The numerous shoals which were outlined on the topographic sheets by a dashed black line were not transferred to the hydrographic sheet but the three foot curve was drawn which gives an accurate outline of the above shoals.

2. The work in and around Tom's Harbor was very congested and it was necessary for the verifier to plot all positions in this area. Moreover an excessive amount of crossing had been done on the sheet which

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5952 (1935) FIELD NO. 14

Lower Matecumbe to Grassy Key, Florida Keys, Florida
Surveyed in March - May 1935, Scale 1:20,000
Instructions dated November 17, 1933 (H. A. Cotton)

Hand Lead and Pole Soundings.

3 Point fixes on shore signals.

Chief of Party - E. R. McCarthy.

Surveyed by - J. T. Jarman, J. B. Finch, T. R. F.

Protracted by - M. B. G., Jr., C. G. L., L. G. K.

Soundings penciled by - C. G. L., L. G. K.

Verified and inked by - G. C. McGlasson.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual except as follows:

- a. The initials of the persons transferring and checking the topographic stations were not shown on the smooth sheet. The signals were checked in the office.
- b. Descriptive notes were omitted for several signals located in the water areas. They are assumed to be of a temporary nature and of no importance in charting.

The Descriptive Report is exceptionally comprehensive and satisfactorily covers all items of importance.

2. Compliance with Instructions for the Project.

The plan, character and extent of development are in accordance with the instructions for the project.

3. Shoreline and Signals.

- a. Topographic signals are derived from graphic control surveys T-6418a and b (1935).
- b. Hydrographic signals were located by sextant fixes recorded in the sounding records. (see page 1, Vol. I, for index of fixes).
- c. The shoreline originates with topographic maps T-5541 (1935) and T-5542 (1935).

4. Sounding Line Crossings.

The sounding line crossings are satisfactory, the depths generally agreeing within 1 foot or less.

5. Depth Curves.

Within the area covered the usual depth curves can be satisfactorily drawn.

6. Junctions with Contemporary Surveys.

- a. The junctions with H-5892a (1935) and H-5947 (1935) are satisfactory.
- b. The junctions with H-6113 (1935) and H-6133 (1935) will be considered in the reviews of those surveys.
- c. There are no contemporary surveys on the south nor are any contemplated in the instructions. The junction of the present survey with prior surveys is satisfactory, however, for charting purposes.

7. Comparison with Prior Surveys.

H-773 (1860), H-774 (1862), H-1927 (1889).

These surveys are on scales 1:20,000, 1:20,000 and 1:40,000 respectively. The first practically covers the entire area of the present survey, the others overlapping it slightly to the east and north. The agreement with the present survey is fair though a slight deepening (1 to 1-1/2 feet) is indicated in some areas and several of the shoals seem to have shifted in position though the depths agree within 1 or 2 feet. In comparing with prior surveys and searching for shoals, the field party used an enlargement of Chart 1250. This chart shows a very much generalized representation of the area. A number of isolated shoals separated by much deeper water are usually represented by a single sounding with the appropriate curve enclosing the entire area. This fact accounts for many of the differences noted in the Descriptive Report. In as much as most of the shoals ~~are~~ fall in depths where the bottom was clearly visible (see Descriptive Report, page 22, par. 5), and the probability that the sand shoals shifted in position as demonstrated by other surveys along the Florida Keys, the present survey is believed to represent existing conditions, and comment is made only on a few of the 111 items listed in the Descriptive Report under "Shoals and Dangers".

- a. The 17 foot spot (charted) in lat. 24° 45.3', long. 80° 48.0', on H-773 (1860) originates with pos. 56 - 57 N (red) and falls in depths of 23 to 24 feet on the present survey. An investigation of the original record shows two soundings of 17-1/2 and 18-1/2 feet between depths of 24 and 26 feet. The bottom is very even in this area and it is possible

that the two soundings were recorded 1 fathom too shoal. The area was investigated on the present survey (see descriptive report, page 7, item 41), but in view of the agreement of surrounding depths on the two surveys, the safest course has been adopted and the 17 foot depth carried forward.

- b. The 5 foot sounding (charted) in lat. $24^{\circ} 43.3'$, long. $80^{\circ} 55.85'$, on H-773 (1860) originates with pos. 14 - 15 of March 1, 1860 (volume 14) and falls in depths of 12 to 13 feet on the present survey. The old survey shows depths of 7 and 8 feet in the immediate vicinity but the shoalest depth on the present survey is $9\text{-}1/2$ feet. The area was investigated extensively on the present survey (see descriptive report, page 15, item 106) and the rejection of the 5 foot depth recommended. In view of the rocky nature of the bottom, however, it is considered best to retain the 5 foot depth and it and several adjacent soundings have been carried forward to the present survey.
- c. The shoal charted as a ridge in lat. $24^{\circ} 44.9'$, long. $80^{\circ} 51.3'$, is shown on H-773 (1860) as three separate shoals with depths of 17, 15 and $15\text{-}1/2$ feet in general depths of 21 to 24 feet. The present survey shows a considerable change in details in this vicinity. The shoals have shifted about 200 meters to the southwest and the two western shoals now form a single larger shoal with a least depth of 16 feet. The area was investigated by the field party (116 to 133y - M) and the record states "Bottom plainly visible, showing smooth white sand - No indications of shoaler soundings in this vicinity". The lines of the development work (40 to 42A red and 88 to 90 A red) were spaced too far apart but the launch must have crossed the area during the later "investigation" on the lookout for shoals, although no soundings were recorded. The representation on the present survey should be accepted for future charting. (Items 68 and 75, Descriptive report).

8. Comparison with Chart 1250 (New Print dated Dec. 1, 1936).

a. Hydrography.

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraph and contains no other information that needs consideration in this review.

b. Aids to Navigation.

The charted aids to navigation are in agreement with the positions given on the present survey except beacon "I" in lat. $24^{\circ} 46'$, long. $80^{\circ} 45.2'$, which is charted about 200

meters to the west of the location on the present survey (1934 triangulation) in the position in which it was charted before the hurricane of Sept. 10-11, 1919. The 1934 triangulation position of this beacon should be used for future charting.

9. Field Plotting.

The field plotting was excellent.

10. Additional Field Work Recommended.

The survey is very satisfactory and no further work is required.

11. Superseded Old Surveys.

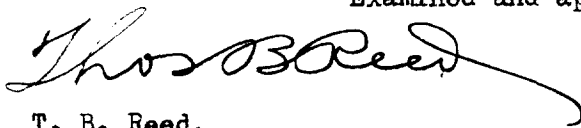
Within the area covered the present survey supersedes the following surveys for charting purposes:

H-773 (1860) in part
H-774 (1862) in part
H-1927 (1889) in part

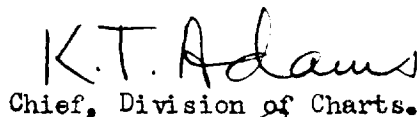
12. Reviewed by - R. J. Christman, April 3, 1937.

Inspected by - J. A. McCormick.

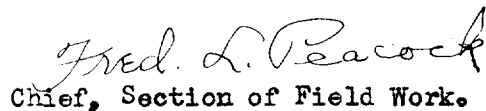
Examined and approved:



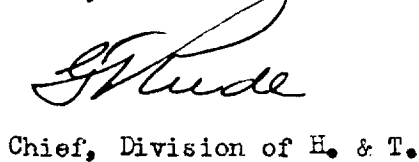
T. B. Reed,
Chief, Section of Field Records.



Chief, Division of Charts.



Chief, Section of Field Work.



Chief, Division of H. & T.

applied to chart 1250 Dec. 1, 1938. G.H.S. + Heller

" " " 851 Sept 16, 1958 JFW

851-852 - added 12' x 18' currc around Lt "45" at East Turtle Shoal ^{4/14/00}